Problem Set #3

1. In Japan, the population \( L \approx 125 \text{ million} \), capital stock \( K \approx ¥1500 \text{ trillion} \) and output \( Y \approx ¥500 \text{ trillion} \) so that
\[
k = \frac{K}{L} = ¥12 \text{ million} \quad \text{and} \quad y = \frac{Y}{L} = ¥4 \text{ million}.
\]
Assume that \( \delta = 0.04, n + g = 0.04, \text{ and } y = 1.9k^{0.3} \).

a. If the Japanese want their current level of output to be a steady state level of output, what should their savings rate be? I/Y is currently about 22-23%. Are they above or below the steady state savings rate. What does this imply?

b. What is the golden rule level of capital per worker? What is the golden rule savings rate which maximizes the level of per capita consumption? Is this different from the U.S.?

2. Ch. 6, p.175, #1

3. Ch. 7, p. 201, #1

4. Ch. 8, p.232, #1

5. Ch. 9, p.261, #5

6. Ch. 9, p.269, #3

(hold off on #1 and #5 until Tuesday)

*Due Thursday 28 February*